

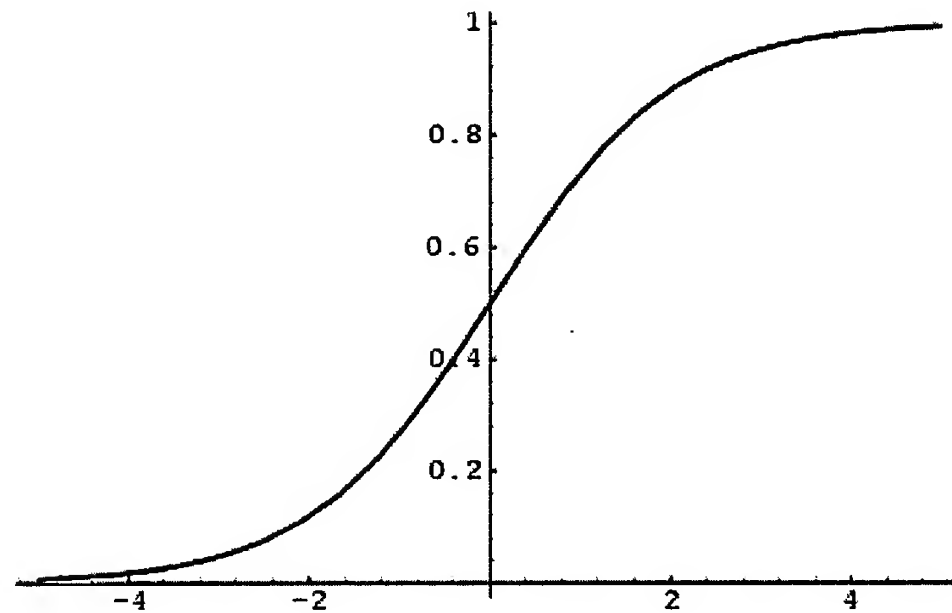
Sigmoid Curve

See [Sigmoid Function](#)

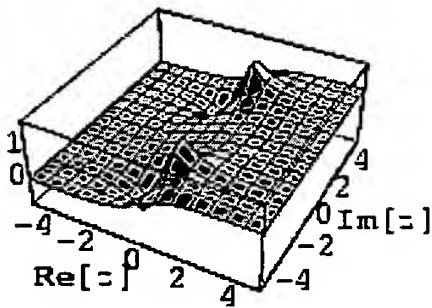
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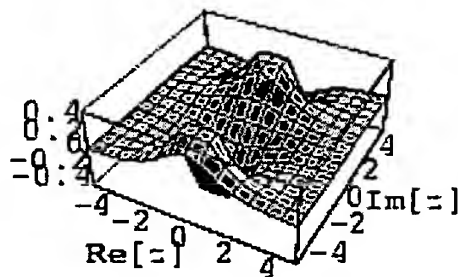
Sigmoid Function



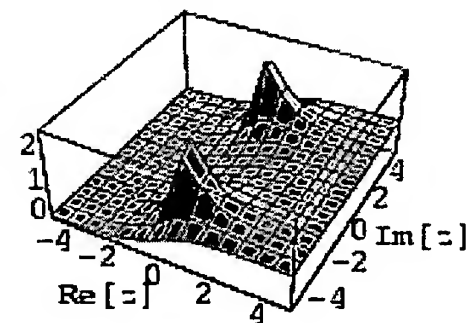
`Re[SigmoidFunction z]`



`Im[SigmoidFunction z]`



`|SigmoidFunction z|`



The function

$$y = \frac{1}{1 + e^{-x}}$$

which is the solution to the Ordinary Differential Equation

$$\frac{dy}{dx} = y(1 - y).$$

It has an inflection point at $x = 0$, where

$$y''(x) = -\frac{e^x(e^x - 1)}{(e^x + 1)^3} = 0.$$

See also Exponential Function, Exponential Ramp

References

von Seggern, D. CRC Standard Curves and Surfaces. Boca Raton, FL: CRC Press, p. 124, 1993.

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Posterior probability

In Bayesian probability theory, the **posterior probability** is the probability of some event occurring after empirical data has been considered. It can be calculated by Bayes' theorem. Compare with prior probability, which is subjectively judged in the absence of empirical data.

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